PUBLIC VERSION

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Before the
COPYRIGHT ROYALTY BOARD
LIBRARY OF CONGRESS
Washington, D.C.

In the Matter of: Determination of Rates and Terms for Making and Distributing Phonorecords (Phonorecords III)	Docket No. 16-CRB-0003-PR (2018-2022)

WRITTEN SUPPLEMENTAL REMAND TESTIMONY OF DR. GREGORY K. LEONARD

I. QUALIFICATIONS AND ASSIGNMENT

1. My qualifications are summarized in my Written Direct Remand Testimony ("WDRT"), dated April 1, 2021.

2. I have been asked by Google to review and respond to certain opinions offered by Copyright Owners' experts Drs. Jeffrey Eisenach and Richard Watt in their respective Written Direct Remand Rebuttal Testimonies ("WDRRT").

3. My analysis and this report are based on information currently available to me. I reserve the right to augment or update opinions.

II. SUMMARY OF OPINIONS

4. I have reached the following opinions:

- Dr. Watt and Dr. Eisenach claim that the Phonorecords III Initial Determination [redacted] as a result of the "see saw effect." However, the Phonorecords III Initial Determination could not have caused any [redacted] because [redacted] before the Phonorecords III Initial Determination was issued. Thus, Dr. Watt and Dr. Eisenach have confused correlation for causation.
- In addition, Dr. Eisenach's comparison of [redacted] during the Phonorecords III and Phonorecords II periods is fundamentally flawed and unreliable because:
    - Dr. Eisenach fails to account for a change [redacted] that occurred at the start of the Phonorecords III period. His failure to account for this change means that Dr. Eisenach mistakes an artifact in the data for a [redacted] The data for the YouTube ad-supported service (which was not affected by [redacted]) shows no significant [redacted], contrary to the predictions of the "see saw theory."
    - Dr. Eisenach cherry-picks 2017 as the only year from the Phonorecords II period that he compares against the Phonorecords III period. Had he used

the exact same methodology but examined other years, e.g. 2015, he would have reached a different conclusion [redacted]

- Dr. Eisenach inappropriately aggregates the data for the three Google services (Google Play Music, YouTube subscription, and YouTube ad-supported) together. When each of the three services are instead analyzed separately, the data [redacted]

- Dr. Watt still fails to provide any sound empirical evidence to support the inputs to his theoretical model, including the assumed "see saw effect." As a result, his theoretical model should be accorded no weight.

III. DR. WATT AND DR. EISENACH'S CLAIMS THAT THE PHONORECORDS III INITIAL DETERMINATION CAUSED [redacted] ARE FALSE

5. Dr. Watt and Dr. Eisenach claim to have found evidence of the so-called "see saw effect" in data [redacted].[1] Specifically, Dr. Eisenach claims that [redacted] Dr. Watt and Dr. Eisenach each conclude that this supposed [redacted] was *caused* by the Phonorecords III Determination.[2] However, these claims are incorrect both because they confuse correlation and causation, and because Dr. Eisenach committed several errors when calculating [redacted]

[1] Watt WDRRT ¶¶ 41-45 (referencing Eisenach's analyses of royalty data as support for the see saw theory); Eisenach WDRRT ¶¶ 9 (characterizing his analysis as pertaining to the "impact" of Phonorecords III on royalties), ¶¶24-27 (containing analyses specific to Google).

[2] *Id.*

A. Dr. Eisenach and Dr. Watt Confuse Correlation and Causation

6. As described below, Dr. Eisenach's claims regarding [redacted] are based on calculation errors, selective use of data from a specific time period, and inappropriate aggregation across services. But, even if [redacted] after the Phonorecords III Initial Determination, this would constitute evidence of the "see saw effect" *only if* the Phonorecords III Initial Determination was shown to have *caused* [redacted] by, for example, *causing* a renegotiation of the royalty structure or terms contained in the licensing agreements [redacted]. Otherwise, the [redacted] would be a case of correlation, not causation.

7. However, as a matter of basic causal logic, the Phonorecords III Initial Determination *cannot* have *caused* [redacted] during the 2018-2020 period. This is because the Google license agreements with major labels that governed [redacted] that signaled higher musical works royalty rates.[3] Absent a crystal ball, when negotiating these agreements [redacted] could not have been affected by the Phonorecords III Initial Determination because it had not yet been issued. Thus, the royalty structures and terms contained in these agreements, [redacted], including during the 2018-2020 period, could not have been affected by the Phonorecords III Initial Determination. Nor were the

[3] Diab WDRT ¶¶ 10-11 (describing the time periods when Google entered sound recording agreements governing rates paid on Google Play Music and YouTube Music).

royalty structures and terms of any of these [redacted].[4] Thus, to the extent that [redacted], it must have been due to factors other than the Phonorecords III Initial Determination.[5] Thus, there is no support for the "see saw effect" to be found in [redacted]

B. Dr. Eisenach's Claim That [redacted] Are Based on a Calculation Error

8. Dr. Eisenach calculated what he claims is [redacted] by dividing the [redacted].[6] He uses the result of this calculation as a means of comparing the effective sound recording royalty rates during the Phonorecords II (2017) and Phonorecords III (2018-2020) periods. However, Dr. Eisenach fails to recognize that [redacted].[7] Dr. Eisenach's failure to account for the [redacted] biases his analysis and renders it unreliable.

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4 *Id.*

5 In my WDRT, when I stated that the sound recording royalty rates [redacted]. I was referring to the fact that [redacted]. Leonard WDRT ¶ 17. Note that, even if there were no change in the underlying royalty structures [redacted], it is possible that the overall [redacted] royalty rate could fluctuate due to changes in the mix of labels, plans, and Google services or other factors. However, changes in the effective sound recording royalty rate due to any such factor were not caused by the Phonorecords III Initial Determination.

6 Eisenach WDRRT ¶¶ 14, 25-27.

7 Interview of Jen Rosen (Head of Music Publishing Partnerships at Google), November 8, 2021.

9. Prior to 2018, when the Phonorecords II rate structure applied, the first step of the royalty calculation specified that the all-in royalty for musical works was to be calculated as the maximum of (1) 10.5% of revenue and (2) the minimum of (a) a specified percentage of the sound recording royalty rate for Section 115 content (TCC) and (b) a specified per subscriber amount. [redacted].[10]

10. Given that some subscribers were on family plans, annual plans, or other discounted plans, [redacted].[11] To understand why [redacted] would

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[8] *Id*.

[9] *See* MLC_CRB_PHONO3_00000024 (showing that [redacted] for the Google Play Music services, with [redacted]). It is not surprising [redacted]. As noted, the first step of the Phonorecords II royalty calculation asked which is smaller, a specified percentage of TCC or a specified PSM. Consider as an example a standard standalone portable subscription, priced at $9.99 per month. Under Phonorecords II, the TCC percentage was 21% and the PSM was $0.80 for such a plan. [redacted] Thus, for a standard portable subscription, the Phonorecords II TCC prong was at least 21% [redacted], which would exceed the Phonorecords II PSM prong of $0.80. Thus, the latter would be used as the comparison against the 10.5% of revenue in the next step of the Phonorecords II calculation.

[10] *See* GOOG-PHONOIII-00008681 (Excel sheet containing TCC calculations for Google Play Music during 2016 and 2017).

[11] *See, e.g.*, GOOG-PHONOIII-00007547-555 at 548-51 (Google-Sony agreement allowing [redacted]) and GOOG-PHONOIII-00007885-999 at 935-39 and 990-93 (Google-Warner agreement [redacted]). As further evidence, I have compared the actual [redacted] to a hypothetical outcome using [redacted]

not adversely impact Copyright Owners or significantly impact Google, note that during the relevant period Google [redacted].[12] Moreover, [redacted].[13]

11. Under the new rate structure in the Phonorecords III decision, the specified percentage of revenue is compared directly to the specified percentage of TCC (without the PSM prong to "cap" TCC), which changed the potential [redacted]. Accordingly, starting at the beginning of 2018, [redacted].

12. Because of the [redacted]. Dr. Eisenach failed to account for this in any way. Consequently, what he claims is a [redacted] is at least in part an artifact of the [redacted].

13. Indeed, the evidence suggests that Google's effective sound recording royalty rate, correctly calculated, [redacted], contrary to Dr. Eisenach's claim. Because the Google-label agreements [redacted] for the ad-supported YouTube

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[redacted]. *See* Exhibit 2.

[12] *See* MLC_CRB_PHONO3_00000024.

[13] The TCC calculation could only control the outcome of the royalty calculation where the reported TCC number was *lower* than the PSM. Thus, even if [redacted].

(AVOD) service, Google would not have been able [redacted] for YouTube AVOD as it did for the Google Play Music subscriber service. Thus, if Dr. Eisenach had restricted his analysis to the YouTube AVOD service, he could have avoided the apples and oranges problem [redacted]. I have calculated the effective sound recording royalty rates for the YouTube AVOD service. The rate in the last full year of the Phonorecords III period for which the data exist, 2020, [redacted]—despite the increases in the headline musical works royalty rate specified in the Phonorecords III Initial Determination.[14] Thus, even putting aside the lack of any form of *causation*, as noted above, a more accurate analysis of [redacted] demonstrates that there is not even a *correlation* between [redacted] and the Phonorecords III Initial Determination.

C. Dr. Eisenach Cherry-Picks 2017 As His Phonorecords II Comparison Year

14. Dr. Eisenach uses 2017 as a proxy for the entire Phonorecords II period when comparing [redacted] during the Phonorecords II and Phonorecords III periods.[15] However, he has cherry-picked this year and in so doing has biased his results. Anomalies in the 2017 data suggest that the [redacted] calculated using this one year [redacted].[16] Accordingly, Dr. Eisenach's use of 2017 (rather than other parts of the Phonorecords II period) renders his analyses unreliable.[17]

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[14] *See* Exhibit 1.

[15] *See, e.g.*, Eisenach WDRRT at Figures 4 and 5.

[16] Dr. Eisenach's own Figure 4 shows that his calculation of the [redacted].

[17] The bias induced by Dr. Eisenach's focus on 2017 is not limited to his [redacted] in the Phonorecords II and Phonorecords III periods. He also focused exclusively on a single month in 2017 when arguing (at Eisenach WDRRT ¶¶ 73-74) that [redacted]

15. Reviewing earlier years within the Phonorecords II period demonstrates that Dr. Eisenach's analysis was sensitive to his cherry-picking 2017 as the comparison year. For example, had Dr. Eisenach chosen to use 2015 as the comparison year instead of 2017, he would have found [redacted] during the Phonorecords III period. [redacted].[18]

D. Dr. Eisenach's Incorrect Aggregation of the Three Google Services (Google Play Music, YouTube AVOD, and YouTube SVOD) [redacted]

16. Dr. Eisenach performs two analyses of Google's data. First, he presents results for Google Play Music alone, and second, he presents results based on combining the data for the three Google services — Google Play Music, YouTube AVOD, and YouTube SVOD — together into a single aggregate. He fails to look at each of the two YouTube services in isolation (as he did with Google Play Music) — likely because doing so would [redacted].

17. As discussed above, Dr. Eisenach's results for Google Play Music are fatally flawed because he failed to account for [redacted] and because he cherry-picked 2017 as his year of comparison. When he aggregates the three services together, he introduces his errors concerning Google Play Music into the aggregated data.

18. Additionally, the YouTube AVOD data, when viewed on a standalone basis, demonstrate [redacted] between 2017 and the end of the Phonorecords III period (2020) despite an increase in the headline musical works royalty rate

[redacted]. Again, the focus on just a single month in 2017 is unreliable, and his cherry-picking of a single outlier month has biased his analysis.

[18] *See* Exhibit 1.

specified in the Phonorecords III Initial Determination over the same period.[19] This result is [redacted] Dr. Eisenach's claim and the "see saw theory."

19. For YouTube SVOD, the [redacted], despite the increase in the headline musical works royalty rate specified in the Phonorecords III Initial Determination over the same period.[20] This pattern is [redacted] what the "see saw theory" would predict.

20. Thus, when the data for the three services are disaggregated and analyzed, they are shown to be [redacted] Dr. Eisenach's and Dr. Watt's claims regarding the "see saw effect."

IV. DR. WATT FAILS TO SUPPORT HIS CLAIMED SEE SAW EFFECT

21. In my WDRT, I critiqued Dr. Watt's testimony concerning the claimed "see saw effect" from the original Phonorecords III proceeding on the basis that it was based on an overly simplified theoretical model for which he had provided no empirical support.[21] In his WDRRT, Dr. Watt continues to provide no valid empirical support for his theoretical model. In particular, he argues at paragraphs 15 through 18 that he is elucidating certain "core principals" of bargaining for the Judges. However, as Judge Strickler observed in his dissenting opinion, "theory must meet reality."

22. Dr. Watt's high-level arguments regarding the usefulness of theoretical models miss the point.[22] As an originator of the "merger simulation" method for evaluating the likely competitive effects of mergers, I myself have used theoretical models, combined with econometric estimates

[19] *See* Exhibit 1.

[20] MLC_CRB_PHONO3_00000028.

[21] Leonard WDRT ¶¶ 15-22.

[22] Watt WDRRT ¶¶ 15-18 (discussing "core principals" of bargaining).

of the model parameters, to make predictions about competitive effects. However, I have emphasized that the entire enterprise depends crucially on appropriate econometric (empirical) estimation of the model parameters and allowing for model flexibility rather than imposing particular functional forms.[23] Moreover, I have discussed ways in which the validity of the theoretical model as a description of reality can and should be assessed using econometric and other methods.[24]

23. Dr. Watt has failed to do any of this type of "due diligence" for his modeling exercise despite basing claims for hundreds of millions of dollars in royalties on the resulting model. This does not represent sound economic analysis.

24. Indeed, Dr. Watt appears to have not paid any attention to the last 25 years of developments in the economics literature, which have seen a much greater emphasis placed on credible empirical analyses and a reduced emphasis on theoretical modeling. A relevant example is provided by the minimum wage study for which (in part) David Card won the 2021 Nobel Prize. As a popular press article about Card's Nobel Prize stated:

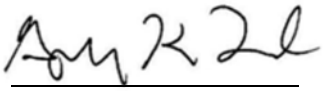
> Up until [Card's study, co-authored with Alan Kreuger], economists thought about the effects of the minimum wage as they did most other subjects — mostly in theoretical terms. Their view of the world was more influenced by cartoon models drawn on chalkboards than hard data. And this cartoon world said that the minimum wage kills jobs.
>
> Card and Krueger wanted to see how the minimum wage affects jobs in the real world … [Using an empirical analysis of a "natural experiment,"] [t]hey found that a modest increase in the minimum wage did not kill jobs. It was a bombshell

[23] J. Hausman, G. Leonard, and D. Zona, "Competitive Analysis with Differentiated Products," *Annales d'Economie et de Statistique*, 1994.

[24] J. Hausman and G. Leonard, "The Competitive Effects of a New Product Introduction: A Case Study," *Journal of Industrial Economics*, 2002.

> for the economic world, challenging an orthodoxy that had dominated the field for decades.[25]

25. Theoretical models predicted that increasing the minimum wage would reduce employment. Card and Kreuger's empirical analysis (which was not dependent on a theoretical model) showed that was not the case in the real world. Dr. Watt's theoretical model here is analogous to the "cartoon models" of the impact of the minimum wage. As with the minimum wage, a credible empirical analysis is needed before conclusions can be drawn regarding the existence of a see saw effect in the real world. Dr. Watt has not provided one.



Gregory K. Leonard

Dated: November 15, 2021

[25] "A Nobel Prize for a revolution in economics," NPR, October 12, 2021, available at https://www npr.org/sections/money/2021/10/12/1045152279/a-nobel-prize-for-a-revolution-in-economics.

APPENDIX A

Appendix A
Documents Cited

Bates Documents

GOOG-PHONOIII-00007547-555.
GOOG-PHONOIII-00007885-999.
GOOG-PHONOIII-00008681.
GOOG-PHONOIII-00008690.
GOOG-PHONOIII-00008691.
GOOG-PHONOIII-00008692.
MLC_CRB_PHONO3_00000024.
MLC_CRB_PHONO3_00000027.
MLC_CRB_PHONO3_00000029.

Other Documents

"A Nobel Prize for a revolution in economics," NPR, October 12, 2021, available at https://www npr.org/sections/money/2021/10/12/1045152279/a-nobel-prize-for-a-revolution-in-economics.

Interview of Jen Rosen (Head of Music Publishing Partnerships at Google), November 8, 2021.

J. Hausman and G. Leonard, "The Competitive Effects of a New Product Introduction: A Case Study," Journal of Industrial Economics, 2002.

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Remand Written Rebuttal Testimony of Jeffrey A. Eisenach, Ph.D., July 2, 2021.

Remand Written Rebuttal Testimony of Richard Watt (PhD), July 2, 2021.

Written Direct Remand Testimony of Dr. Gregory Leonard, April 1, 2021.

Written Direct Remand Testimony of Waleed Diab, April 1, 2021.

EXHIBITS

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Exhibit 1
Google Annual Sound Recording Royalty Rates by Product and Service Type
2013 - 2020

Product	Service Type	Year	Total Cost of Content	Revenue	Sound Recording Royalty Rate[1]
[a]	[b]	[c]	[d]	[e]	[f]
Google Play Music[2]	Subs Service	2013	[redacted]		
		2014			
		2015			
		2016			
		2017			
		2018			
		2019			
		2020			
YouTube Music	Ads Service	2015			
		2016			
		2017			
		2018			
		2019			
		2020			

Notes: [1] Sound Recording Royalty Rate is calculated as dividing Total Cost of Content by Revenue.

[2] Google Play Music has revenue data starting from June 2013 and ended its service in October 2020. Therefore, the figures for Google Play Music begin in June 2013 and end in September 2020. See MLC_CRB_PHONO3_00000024.

Sources: MLC_CRB_PHONO3_00000024.
MLC_CRB_PHONO3_00000027.
MLC_CRB_PHONO3_00000029.

Exhibit 2

[redacted]

Month [a]	[redacted]
August 2018	[redacted]
September 2018	
October 2018	

Notes: [redacted]

Sources: Diab WDRT ¶¶ 10-11.
MLC_CRB_PHONO3_00000024.
GOOG-PHONOIII-00008690.
GOOG-PHONOIII-00008691.
GOOG-PHONOIII-00008692.

Proof of Delivery

I hereby certify that on Monday, November 15, 2021, I provided a true and correct copy of the WRITTEN SUPPLEMENTAL REMAND TESTIMONY OF DR. GREGORY K. LEONARD (PUBLIC) to the following:

Spotify USA Inc., represented by Richard M Assmus, served via ESERVICE at rassmus@mayerbrown.com

Pandora Media, LLC, represented by Benjamin E. Marks, served via ESERVICE at benjamin.marks@weil.com

National Music Publishers' Association (NMPA) et al, represented by Benjamin Semel, served via ESERVICE at Bsemel@pryorcashman.com

Nashville Songwriters Association International, represented by Benjamin K Semel, served via ESERVICE at Bsemel@pryorcashman.com

Johnson, George, represented by George D Johnson, served via ESERVICE at george@georgejohnson.com

Amazon.com Services LLC, represented by Scott Angstreich, served via ESERVICE at sangstreich@kellogghansen.com

Signed: /s/ David P Mattern